UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,192	12/04/2003	Mark L. Buer	2875.0170001	7312

26111 7590 10/14/2009

STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.
1100 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER	
WILLIAMS, JEFFERY L	
ART UNIT	PAPER NUMBER
2437	
MAIL DATE	DELIVERY MODE
10/14/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/728,192	BUER ET AL.	
	Examiner	Art Unit	
	JEFFERY WILLIAMS	2437	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 July 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 – 7, 9, 13 – 33, and 35 – 40* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 – 7, 9, 13 – 33, and 35 – 40* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This action is in response to the communication filed on 7/6/09.

All objections and rejections not set forth below have been withdrawn.

Claims 1 – 7, 9, 13 – 33, and 35 – 40 are pending.

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

The specification fails to provide proper antecedent basis for the recitations (or essentially similar recitations) "a user-specific type field", "wherein the outer Ethernet header comprises a user-specific type field", as found recited within claims 5 – 7, 9, 18, 30, 35, 36 and 38.

The specification fails to provide proper antecedent basis for the recitations of "pre-populated with an address…" and "the pre-populated header" as found recited within claim 17. The examiner notes that the specification appears to disclose a header comprising an address but does not provide clear support or antecedent basis for the term "pre-populated" such that the meaning of the terms in the claims may be ascertainable by reference to the description. It appears that the applicant's amendment from a header comprising an address to a header "pre-populated" with an

address is an attempt to distinguish subject matter in a manner that is not supported and is not based upon the applicant's disclosure.

The specification fails to provide proper antecedent basis for the recitations (or essentially similar recitations)

"wherein a destination address of the second Ethernet packet is an address of the originating device" [e.g. claim 1],

"a second Ethernet packet having a header pre-populated with an address of the originating device as the destination address", and "returning the second Ethernet packet to the originating device, wherein the returned second Ethernet packet includes the pre-populated header and the encrypted packet data" [e.g. claim 17],

" wherein the first Ethernet packet includes a header having an address of the originating device as the destination address…", and "wherein the second Ethernet packet includes a header having an address of the security processor as the destination address, wherein a portion of the packet data of the generated first Ethernet packet is cryptographically processed by the security processor and the portion of the packet data is replaced with the cryptographically processed data when the first Ethernet packet is returned to the originating device" [e.g. claim 26],

"a second Ethernet packet including a header having an address of the originating device as the destination address…", and "a unit configured to transmit the second Ethernet packet, including the at least a portion encrypted by the encryption processor, to the originating device" [e.g. claim 37].

The examiner notes that the applicant's disclosure appears to provide antecedent basis for two distinct concepts: IPSec communication between hosts on a network (e.g. figs. 4, 9; par. 66, 76-78) and the configuration of a security processor (e.g. par. 63 – 65). However, the applicant's specification does not support the mixture of security processor configuration and IPSec processing as presently claimed. In other words, a security processor either receives configuration packets, wherein packets may be sent back to a host device or a security processor may receive communication packets, wherein the processor performs IPSec processing upon such packets and sends them outbound over a network (e.g. see par. 63-66).

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1 – 7, 9, 13 – 33, and 35 – 40 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant has not clearly pointed out where the new (or amended) claim is supported, nor does there

appear to be a written description of the claim limitations in the application as filed (see above objection to the specification).

For example, applicant claims that *"a user-specific type field"* is supported by the specification, paragraph 60. However, the examiner notes that the applicant's citation of the alleged support merely refers to the prior art Ethernet type field. The examiner reminds the applicant that the claim or claims must conform to the invention as set forth in the remainder of the specification and the terms and phrases used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description.

Furthermore, as example, it is noted that applicant refers to paragraphs 64 and 65 of the applicant's specification for returning packets that have been IPSec processed back to a host device, however, the examiner notes that paragraphs 64 and 65 pertain to a discussion of configuration packets as opposed to IPSec communication.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 – 7, 9, 13 – 33, and 35 – 40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1, 17, 26, and 37, the examiner notes that the applicant's amendments cause the scope of the claims to become indefinite. The examiner notes

that there is no antecedent basis within the applicant's specification for the language of the added recitations. Thus, the examiner interprets the applicant's amendments in light of the applicant's arguments, wherein the applicant asserts that the claimed features are supported within the applicant's disclosure (e.g. par. 64, 65) within the context of configuration packets for the configuration of a security processor. However, the examiner points out that security processor configuration and IPSec communication are distinct processes. Thus, the scope of these claims is indefinite, as it is unclear what process the applicant is attempting to claim.

Regarding claims 17, 26, and 37, the examiner notes that the recitation "as the destination address" (e.g. claim 17, line 4) lacks antecedent basis within the claim terminology. For the purpose of examination, the examiner presumes the applicant to recite "as a destination address".

Regarding claims 5 – 7, 9, 18, 30, 35, 36 and 38, they are rejected as being indefinite. The claim recitation of "…a user-specific type field…" or "…a user-specific Ethernet type" lacks a defined and customary meaning to those of ordinary skill in the art and the applicant's fail to define "a user-specific type field", thereby rendering the scope of these claims indeterminate. For the purpose of examination the examiner presumes the applicant to refer to an Ethernet type field as is admitted by the applicant to be the subject matter in question (e.g. Remarks, pg. 11).

All depending claims to the above rejected claims are rejected by virtue of their dependency.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1 – 4, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bryers et al. (Bryers), U.S. Patent Publication 2003/0126233 in view of Hadzic, "Ethernet Packet Encapsulation for Metropolitan Area Ethernet Networks", U.S. Patent, 7,130,303 in view of Mercer et al. (Mercer), "Method for Establishing a Security Association Between Two or More Computers Communicating Via an Interconnected Computer Network", U.S. Patent Publication 2003/0018908.

Regarding claim 1, as best as can be understood by the examiner, it is noted that Bryers discloses

receiving in a security processor a first Ethernet packet from an originating device (fig. 10, 11, 15a, 16; par. 77, 114 – Herein, Bryers discloses a processing unit, such as a router, that performs security processing upon received Ethernet packets;

Bryers discloses a security processor for processing Ethernet packets delivered over a large distributed system (par. 7; fig. 36; par. 488). Bryers, however, does not appear to explicitly recite that one Ethernet packet may comprise another Ethernet packet. Hadzic discloses the practice of generating an Ethernet packet comprising another Ethernet packet for delivery over large distributed systems (Hadzic, fig. 1, 9; 1:44-53). It would have been obvious to one of ordinary skill in the art to employ the teachings of Hadzic with the system of Bryers. This would have been obvious because one of ordinary skill in the art would have been motivated by the prior teachings that such a practice improves the efficiency and security of a network (Hadzic, 1:18-44).

The combination enables:

the first Ethernet packet comprising a second Ethernet packet…wherein a destination address of the second Ethernet packet is an address of the originating device (Hadzic, fig. 1, 9; 1:44-53). The examiner notes that combination discloses that Ethernet packets comprise addresses of originating devices. The examiner notes that it may be possible to suggest that the applicant's recitation of *wherein a destination address of the second Ethernet packet is an address of the originating device* is simply a reference to the fact that an address of a sender may be used by a receiver to send data to the sender.

The combination enables processing encapsulated Ethernet packets according to security associations (Bryers, fig. 10), however, the combination does not appear to explicitly disclose that a packet comprises *a memory address associated with a security association, extracting the memory address, retrieving the security association from a memory using the received memory address*.

Mercer discloses that for the purpose of handling the requirements of high speed networks (Mercer, par. 11), packets should comprise a memory address associated with a security association (Mercer, par. 13). Furthermore, processing such packets includes extracting the memory address and retrieving a corresponding security association from memory (Mercer, fig. 7).

It would have been obvious to employ the improved packet handling and processing techniques of Mercer within the combination. This would have been obvious because one of ordinary skill in the art would have been motivated by the teachings of prior that show such techniques improve security processing (Mercer, par. 11).

The combination enables:

and encrypting at least a portion of the extracted second Ethernet packet according to the retrieved security association (Bryers, fig. par. 193, 194, 198).

Regarding claim 37, it is rejected, at least, for the same reasons as claim 1, and furthermore because the combination enables a processing device for operating according to the Ethernet and IPSEC protocols and comprising *at least one data*

memory for storing at least one security association; at least one Gigabit MAC for receiving at least one second Ethernet packet (Bryers, par. 199, fig. 4).

Regarding claims 2 – 4, 16 the combination *enables an outer Ethernet header and a manufacturer header and wherein the manufacturer header comprises the memory address* and *wherein the outer Ethernet header comprises an Ethernet address of the security processor and wherein the extracting step comprises determining whether an Ethernet address from the at least one second Ethernet packet matches an Ethernet address of the security processor* (Bryers, par. 120, 193; Mercer, par. 13).

Regarding claims 13 – 15, the combination enables *wherein the retrieving step comprises retrieving the at least one security association from a data memory in a security processor and wherein the encrypting step comprises using an encryption key associated with the at least one security association and wherein the encrypting step comprises using an encryption algorithm defined by the at least one security association* (Bryers, par. 120, 121, 124).

Claims 5 – 7, 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Bryers, Hadzic and Mercer in view of Stevens, TCP/IP Illustrated.

Regarding claim 5, the combination does not appear to explicitly disclose that Ethernet packets comprise user-specific type fields. Stevens discloses that composition of packets sent via Ethernet, the composition comprising user-specific type fields (Stevens, pg. 23, fig. 2.1). It would have been obvious to one of ordinary skill in the art to recognize the teachings of Stevens within the combination of Bryers and Mercer. This would have been obvious because one of ordinary skill in the art would have been motivated to follow the established standard required to employ Ethernet.

Regarding claims 6 and 7, the combination enables *wherein a first byte of the manufacturer header is set to zero, and wherein a portion of the manufacturer header following the first byte of the manufacturer header includes the memory address* (Stevens, pg. 22, 23).

Regarding claim 9, it is rejected, at least, for the same reasons as claims 5 – 8.

Response to Arguments

Furthermore, Applicant's arguments filed 9/2/08 have been fully considered but they are not persuasive.

Applicant argues essentially that:

(i) *Thus, the specification describes that the Ethernet type field 62 of a packet may include a type uniquely registered to a user (e.g., a company such as Broadcom). Accordingly, the recitation "user-specific type" in claims 5, 9, 18, and 30 is supported by at least ¶ [0060] of the specification.* (Remarks, pg. 15)

In response, the examiner respectfully notes that this argument has been previously addressed by the office. The examiner respectfully maintains the applicant's claims are merely attempting to recite the prior art Ethernet type field while furthermore using terminology that is not found within the applicant's disclosure. The applicant is reminded that the claims must conform to the invention as set forth in the remainder of the specification and the terms and phrases used in the claims must find clear support or antecedent basis in the description so that the meaning of the terms in the claims may be ascertainable by reference to the description.

(ii) *Thus, Hadzic does not teach or suggest…*

Mercer fails to overcome these deficiencies of Bryers and Hadzic… (Remarks, pg. 13-15)

In response, the examiner respectfully notes that the applicant's arguments essentially comprise a recitation of the claims and with the assertion that the claims are not taught by the prior art. The examiner respectfully notes that such remarks fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the

claims define a patentable invention without *specifically pointing out how* the language of the claims patentably distinguishes them from the references.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

See Notice of References Cited.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JEFFERY WILLIAMS whose telephone number is (571)272-7965. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emmanuel Moise can be reached on (571) 272-3865. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jeffery Williams/
Examiner, Art Unit 2437

/Emmanuel L. Moise/
Supervisory Patent Examiner, Art Unit 2437